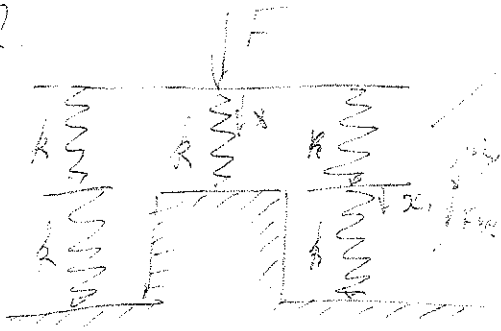


WPA

2.



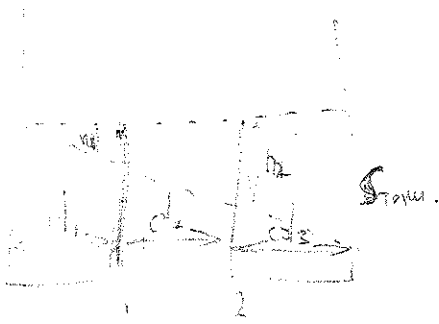
$$F = k \cdot \Delta y = x = kx + 2k(x - x_1) = 3kx - 2kx_1$$

$$k(x - x_1) = F/2$$

$$x = 2kx_1$$

21

5.1



$\Delta L$  - длина за которой уравниваются деформации и на  $h$ , а диаметр  $2k_1, k_2$

Сила - величина  $F = \sigma \Delta L$

$$\frac{h}{d_1} = \frac{h_2}{d_1 + d_2} = \frac{\sigma \Delta L}{d_1 + d_2 + d_3}$$

$$\frac{h_2}{\Delta L} = \frac{\sigma \cdot d_1 + d_2}{d_1 + d_2 + d_3}$$

$$\frac{h_1}{d_1} = \frac{\sigma \Delta L}{d_1 + d_2 + d_3}$$

22

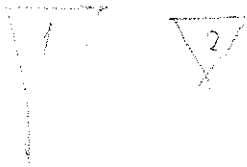
$$\frac{0,2}{\Delta L} = \frac{5 \cdot 2}{3}$$

$$\frac{h_1}{\Delta L} = \frac{\sigma \cdot d_1}{d_1 + d_2 + d_3}$$

$$\Delta L \cdot 3 = 0,2$$

$$\Delta L = \frac{0,2}{3} = L_1$$

2.



$$T_1 = 0^\circ C$$

$$T_2 = 10^\circ C$$

$$L_2 = 0,5 \text{ м}$$

$$L_2 = 7200 \text{ м}$$

$$L_1 = 0,2 \text{ м}$$

$$L_2 = ?$$

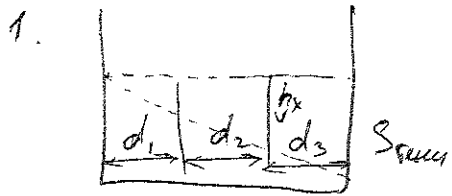
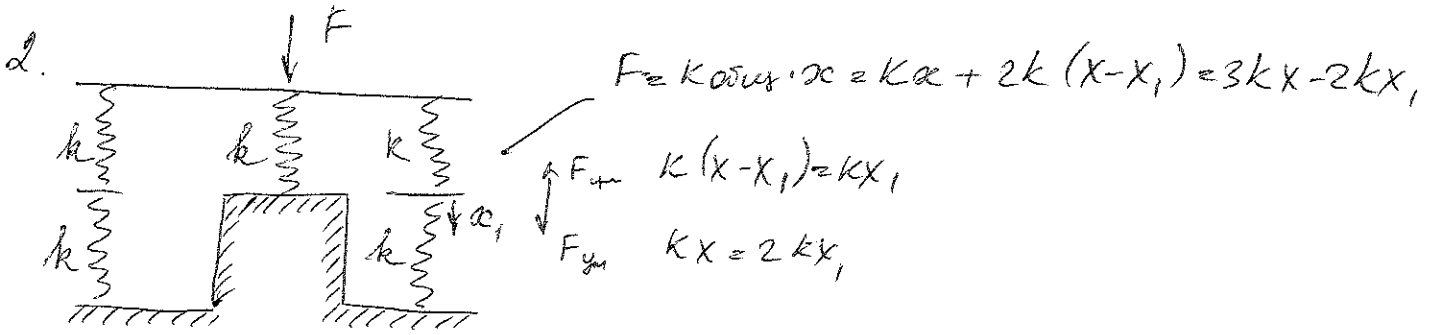
$$V = S \cdot h$$

$$S = \pi r^2$$

$$m = \rho \cdot V = \rho S h$$

$$G = \rho S h \cdot g$$

23



$\Delta t$  - время за которое уменьшается высота на  $h_1$ , а вода на  $h_2$

Срему - площадь срему  $v \cdot \Delta t$

$$\frac{h_1}{d_1} = \frac{h_2}{d_1 + d_2} = \frac{v \cdot \Delta t}{d_1 + d_2 + d_3}$$

$$\frac{h_2}{\Delta t} = \frac{v \cdot (d_1 + d_2)}{d_1 + d_2 + d_3}$$

$$\frac{h_1}{d_1} = \frac{v \cdot \Delta t}{d_1 + d_2 + d_3}$$

$$\frac{0,2}{\Delta t} = \frac{v \cdot 2}{3}$$

$$\frac{h_1}{\Delta t} = \frac{v \cdot d_1}{d_1 + d_2 + d_3}$$

$$\Delta t \cdot v = 0,3$$

$$\Delta t = t_2 - t_1$$



$$T_1 = 0^\circ C$$

$$V = S \cdot h$$

$$T_2 = 10^\circ C$$

$$Q = m \cdot \lambda$$

$$L_2 = 0,5 \text{ м}$$

$$m = \rho \cdot V = \rho \cdot S \cdot h$$

$$t_2 = 7200 \text{ с}$$

$$Q = \rho \cdot S \cdot h \cdot \lambda$$

$$L_1 = 0,2 \text{ м}$$

~~FAH~~  
~~5~~

$$3. \quad v_1 = \frac{54 + 4}{2}$$

$$v_2 = \frac{54 + 4}{2}$$

$$v = 3.5$$

5-?

1. - время до встречи  
I 1003902

~~1/2~~ время м-у поездами  
 $v + v_1$  - скорость сближения

$$L_1 = \frac{L}{v} = \frac{L}{v + v_1} = \frac{v \cdot L_2}{v + v_1}$$

$$\frac{4}{60} = \frac{54 \cdot \frac{1}{6}}{v + 54} \neq$$

$$4(v + 54) = \frac{54 \cdot 60}{4} \neq$$

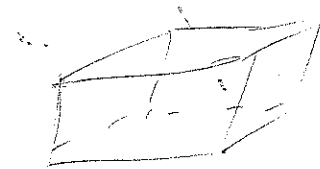
$$v + 54 = 135$$

$$v = 135 - 54$$

$$v = 81 \frac{\text{км}}{\text{ч}}$$

③  $V_{\text{управ}} = 0,1 \cdot 0,1 \cdot 0,2 = 0,002$

$$V_{\text{рабоч}} = 1 \cdot 2 \cdot 2 = 2 \text{ м}^3$$



④

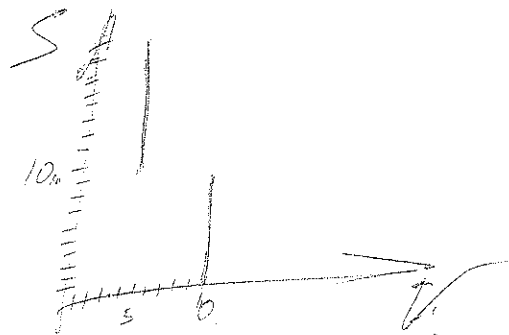
$$L = v \cdot t$$

$$v = \frac{L}{t}$$

$$L_1 = v_1 \cdot t_1 = 10 \cdot 1 = 10 \text{ м}$$

$$L_2 = v_2 \cdot t_2 = 0 \cdot 1 = 0 \text{ м}$$

$$L_3 = v_3 \cdot t_3 = 5 \cdot 2 = 10 \text{ м}$$



1/1

$$3. v_1 = 54 \frac{\text{km}}{\text{h}}$$

$$v_2 = 54 \frac{\text{km}}{\text{h}}$$

$v = ?$

$$t = \frac{l}{v} = \frac{l}{v+v_1} = \frac{v \cdot t_2}{v+v_1}$$

$$\frac{4}{60} = \frac{54 \cdot \frac{1}{6}}{v+54}$$

$$v = 81$$

$$4. l = v \cdot t$$

$$v = \frac{l}{t}$$

$$l_1 = v_1 \cdot t_1 = 10 \cdot 1 = 10 \text{ km}$$

$$l_2 = v_2 \cdot t_2 = 0 \cdot 1 = 0 \text{ km}$$

$$l_3 = v_3 \cdot t_3 = 5 \cdot 2 = 10 \text{ km}$$

